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TRANSLATION

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QUESTIONS, ARGUMENTS, OBJECTIONS, PROPOSALS

An analysis of the application documents as submitted, thus carried out at the stage of the substantive examination in accordance with Part Four of the Civil Code of the Russian Federation (hereinafter referred to as the Code), which has been made effective since January 1, 2008 as well as the Patent Cooperation Treaty in the reading thereof now in force (hereinafter referred to as the Treaty) and the Patent Cooperation Treaty Instructions in the reading thereof now in force (hereinafter referred to as the Instructions) has shown the following.

1. What is claimed are a composite anchor bolt and construction method for the anchor bolt as characterized within the scope of the claims in respect to which there has been carried out examination while making also use of what reads the specification.

Relative to the first subject matter – a composite anchor bolt as characterized within the scope of independent claim 1 and dependent claims 2 to 6.

2. As a result of the information retrieval thus carried out, the Examination Division has established the following.

JP 61-002550 U is known in prior art to teach a composite anchor bolt comprising: a first anchor bolt (Ref. No.1, Fig.1) installed projecting outside of a reinforced concrete frame; and a second anchor bolt (Ref. No.6, Fig.1) which is eccentrically positioned to the axis of said first anchor bolt (Ref. No.1, Fig.1); and a connecting part (Ref. No.2, Figs.1 and 2) for connecting said first and the second anchor bolts, wherein said connecting part (Ref. No.2, Figs.1 and 2) is provided with a projecting portion (Figs.1 and 2) which projects in the opposite direction to the first anchor bolt (Ref. No.1, Figs.1 and 2), thereby reducing the bending moment which is exerted locally on the connecting part (Ref. No.2, Figs.1) due to a load on said first anchor bolt (Ref. No.1, Fig.1).

A comparative analysis has shown that the known technical solution thus cited herein above has intrinsic thereto such features that are identical to all the features as contained in independent claim 1 for the presently claimed invention, including the characteristic of the purpose thereof.

Thus, the claimed invention according to independent claim 1 is known from the existing state of prior art in the related field of engineering and, therefore, fails to comply with the patentability condition of "novelty" as envisaged by Para.2, Art.1350 of the Code.

In connection with this, the Examination Division advises the applicant to report his opinion about reasonability, if any, of further proceedings in respect of the above subject matter within the scope of this application and, in case of substantiating such reasonability, to submit his arguments.



3. For the applicant's information, the Examination Division points out the following.

A.) Such features of dependent claim 2 as "the planar configuration (Examiner's Note: to be more exact – the profile) of said connecting part is made to be a polygonal ... shape, thereby increasing the compressive force transfer area of said projecting portion" are known in prior art to be taught by JP 61-002550 U as well as from JP 08-312884 A, E04C 5/12, 26.11.1996, 4 pages.

And, such features of dependent claim 2 as "the planar configuration (Examiner's Note: to be more exact – the profile) of said connecting part is made to be a ... circular shape, thereby increasing the compressive force transfer area of said projecting portion" are known in prior art to be taught by JP 59-188892 U, E04C 1/41, 14.12.1984, 2 pages.

B.) The features of dependent claim 5, which indicate that the first anchor bolt and the second anchor bolt are formed with different diameters, are known in prior art to be taught by JP 61-002550 U.

The features of dependent claim 5, which indicate that the first anchor bolt and the second anchor bolt are formed with the same diameter, are known in prior art to be taught by JP 59-188892 U as well as by JP 08-312884 A.

C.) The features of dependent claims 3, 4 and 6 are not known from the existing state of prior art in the related field of engineering.

Relative to the second subject matter – a composite anchor bolt as characterized within the scope of independent claim 7 and dependent claims 8 to 13.

4. Such a feature of independent claim 7 as "said second anchor bolt can be selectively positioned in a certain circumference" is not expressed clearly and exactly (the claims have no information what circumference is implied here; besides, according to this formulation, the second anchor bolt can be also not positioned in that circumference), this being an infringement to Art.6 of Treaty.

The Examination Division is of opinion that, in accordance with the specification, this feature could have been set forth more correctly as follows: "said second anchor bolt is positioned in a circumference with the center on the axis of said connecting part and the first anchor bolt".

5. In this case, independent claim 7 contains two alternatives:

- a planar configuration of said connecting part is formed in a circular shape (Examiner's Note: it would have been more correctly to translate this feature as the profile of said connecting part has a circular shape); and
- a planar configuration of said connecting part is formed in a polygonal shape (Examiner's Note: it would have been more correctly to translate this feature as the profile of said connecting part has a polygonal shape).

Insofar as the claims thus suggested by the applicant contain a feature expressed by alternative concepts, verification thereof for patentability has been carried out with respect to each combination of features, which includes one of such concepts.

Concerning the first alternative – the profile of said connecting part has a circular shape.

As a result of the information retrieval thus carried out; the Examination Division has established the following.

JP 56-188892 U is known in prior art to teach a composite anchor bolt (Ref. No.1, Figs.1 and 2) comprising: a first anchor bolt (Ref. No.10, Fig.1) installed projecting outside of a reinforced concrete frame (Ref. No.15, Fig.1); a second anchor bolt (Ref. No.8, Figs.1 and 2) which is eccentrically positioned to the axis of said first anchor bolt (Ref. No.10, Figs.1 and 2); and

a connecting part (Ref. No.3, Figs.1 and 2) for connecting said first and the second anchor bolts, wherein the center of said connecting part (Ref. No.3, Figs.1 and 2) and the axis of the first anchor bolt (Ref. No.10, Fig.1) are coaxial, the profile of said connecting part (Ref. No.3, Fig.2) has a circular shape (Fig.2), and said second anchor bolt (Ref. No.8, Figs.1 and 2) is positioned in a circumference with the center on the axis of said connecting part and the first anchor bolt (Fig.2).

A comparative analysis has shown that the known technical solution thus cited herein above has intrinsic thereto such features that are identical to all the features as contained in independent claim 7 for (this alternative of) the presently claimed invention, including the characteristic of the purpose thereof.

Thus, (this alternative of) the claimed invention according to independent claim 7 is known from the existing state of prior art in the related field of engineering and, therefore, fails to comply with the patentability condition of "novelty" as envisaged by Para.2, Art.1350 of the Code.

Concerning the second alternative – the profile of said connecting part has a polygonal shape.

As a result of the information retrieval thus carried out, the Examination Division has established the following.

JP 08-312884 U is known in prior art to teach a composite anchor bolt comprising: a first anchor bolt (Ref. No.9, Figs.1A, 1B and 1C) installed projecting outside of a reinforced concrete frame (Ref. No.GL, Figs.1A and 1B); a second anchor bolt (Ref. No.3, Figs.1A, 1B and 1C) which is eccentrically positioned to the axis of said first anchor bolt (Ref. No.9, Figs.1A, 1B and 1C); and

a connecting part (Ref. No.6, Figs.1A, 1B and 1C) for connecting said first and the second anchor bolts, wherein the center of said connecting part and the axis of the first anchor bolt are coaxial (Fig.1C), the profile of said connecting part has a polygonal shape (Fig.1B), and said second anchor bolt is positioned in a circumference with the center on the axis of said connecting part and the first anchor bolt (Fig.1C).

A comparative analysis has shown that the known technical solution thus cited herein above has intrinsic thereto such features that are identical to all the features as contained in independent claim 7 for (this alternative of) the presently claimed invention, including the characteristic of the purpose thereof.

Thus, (this alternative of) the claimed invention according to independent claim 7 is known from the existing state of prior art in the related field of engineering and, therefore, fails to comply with the patentability condition of "novelty" as envisaged by Para.2, Art.1350 of the Code.

In connection with this, the Examination Division advises the applicant to report his opinion about reasonability, if any, of further proceedings in respect of the above subject matter within the scope of this application and, in case of substantiating such reasonability, to submit his arguments.

6. For the applicant's information, the Examination Division points out the following.

A.) The features of dependent claim 8, which indicate that the profile of said connecting part has a circular shape to increase the adhesive area of the composite anchor bolt with the concrete are known in prior art to be taught by JP 59-188892 U.

The features of dependent claim 8, which indicate that the profile of said connecting part has a quadrangular (polygonal) shape to increase the adhesive area of the composite anchor bolt with the concrete are known in prior art to be taught by JP 08-312884A.

B.) The features of dependent claim 10, which indicate that the first anchor bolt and the second anchor bolt are formed with the same diameter, are known in prior art to be taught by JP 59-188892 U as well as by JP 08-312884 A.

The features of dependent claim 10, which indicate that the first anchor bolt and the second anchor bolt are formed with different diameters, are known in prior art to be taught by JP 61-002550 U.

C.) Such features of dependent claim 13 as "at least one of said first anchor bolt and second anchor bolt is removably attachable to said connecting part (Examiner's Note: to be more correct – detachable from)" are known in prior art to be taught by JP 59-188892 U as well as by JP 08-312884 A.

D.) The features of dependent claims 9, 11 and 12 are not known from the existing state of prior art in the related field of engineering.

Relative to the third subject matter – a composite anchor bolt as characterized within the scope of independent claim 14 and dependent claim 15.

7. As a result of the information retrieval and analysis thus carried out, the Examination Division has established that the subject matter of the invention claimed therein complies with the patentability conditions as envisaged by Art.1350 of the Code.

Relative to the fourth subject matter – a method of installing a composite anchor bolt as characterized within the scope of independent claim 16 and dependent claims 17 and 18.

8. In independent claim 16, it is mentioned that "a composite anchor bolt ... comprises ... a planar connecting part".

However, in accordance with what reads the specification and is shown in the drawing figures, the connecting part 12 (212 and 312) is not planar.

The Examination Division is of opinion that, in accordance with Art.6 of the Treaty, this feature could have been set forth more correctly as follows: "a composite anchor bolt ... comprises ... a connecting part".

9. In this case, independent claim 16 contains two alternatives:

- the removable core is cylindrical; and
- the removable core is polygonal (Examiner's Note: it would have been more correctly to mention that it is polyhedral).

Insofar as the claims thus suggested by the applicant contain a feature expressed by alternative concepts, verification thereof for patentability has been carried out with respect to each combination of features, which includes one of such concepts.

Concerning the first alternative – the removable core is cylindrical.

As a result of the information retrieval thus carried out, the Examination Division has established the following.

JP 59-188892 A is known in prior art to teach a technical solution, wherein disclosure is made of a method of installing a composite anchor bolt (Ref. No.1, Figs.1 and 2), the method comprising the steps of:

preparing a composite anchor bolt (Ref. No.1, Figs.1 and 2) which comprises a first anchor bolt (Ref. No.10, Fig.1) projecting on the outside and a second anchor bolt (Ref. No.8, Figs.1 and 2) positioned eccentrically to the first anchor bolt (Ref. No.10, Fig.1), and a connecting part (Ref. No.3, Figs.1 and 2) connecting the first and second anchor bolts;
removing a cylindrical core from the reinforcement covering margin to confirm the position of the reinforcement when the reinforcement is encountered in the anchor borehole position (in this particular case, since the reinforcement 13 and 14 lies on the axis of the borehole for the first anchor bolt 8 – the cylindrical core, Figs.1 and 2, is removed from the margin

covering the reinforcement 13 and 14), said core corresponding to the shape of said connecting part and surrounding the borehole (Figs.1 and 2);
drilling a borehole for said second anchor bolt (Ref. No.8, Figs.1 and 2); and
jointly attaching said composite anchor bolt (Fig.1).

A comparative analysis has shown that the known technical solution thus cited herein above has intrinsic thereto such features that are identical to all the features as contained in independent claim 16 for (this alternative of) the presently claimed invention, including the characteristic of the purpose thereof.

Thus, (this alternative of) the claimed invention according to independent claim 16 is known from the existing state of prior art in the related field of engineering and, therefore, fails to comply with the patentability condition of "novelty" as envisaged by Para.2, Art.1350 of the Code.

Concerning the second alternative – removable core is polygonal.

JP 59-188892 A is known in prior art to teach a technical solution, wherein disclosure is made of a method of installing a composite anchor bolt (Ref. No.1, Figs.1 and 2), the method comprising the steps of:
preparing a composite anchor bolt (Ref. No.1, Figs.1 and 2) which comprises a first anchor bolt (Ref. No.10, Fig.1) projecting on the outside and a second anchor bolt (Ref. No.8, Figs.1 and 2) positioned eccentrically to the first anchor bolt (Ref. No.10, Fig.1), and a connecting part (Ref. No.3, Figs.1 and 2) connecting the first and second anchor bolts;
removing a cylindrical core from the reinforcement covering margin to confirm the position of the reinforcement when the reinforcement is encountered in the anchor borehole position (in this particular case, since the reinforcement 13 and 14 lies on the axis of the borehole for the first anchor bolt 8 – the cylindrical core, Figs.1 and 2, is removed from the margin covering the reinforcement 13 and 14), said core corresponding to the shape of said connecting part and surrounding the borehole (Figs.1 and 2);
drilling a borehole for said second anchor bolt (Ref. No.8, Figs.1 and 2); and
jointly attaching said composite anchor bolt (Fig.1).

The claimed invention (this alternative thereof) according to independent claim 16 distinguishes over the known technical solution thus cited herein above in that the core to be removed is polygonal.

JP 2003-96918 A, E04B 1/41, 03.04.2003, 8 pages is known in prior art to teach a technical solution, wherein disclosure is made of a method of installing a composite anchor bolt, the method comprising the steps of:
preparing a composite anchor bolt which comprises a first anchor bolt (Ref. No.1, Figs.2 to 5) projecting on the outside and a second anchor bolt (Ref. No.7, Figs. 2 to 5) positioned eccentrically to the first anchor bolt, and a connecting part (Ref. No.5, Figs. 2 to 5) connecting the first and second anchor bolts;
removing a polygonal core from the reinforcement covering margin to confirm the position of the reinforcement when the reinforcement is encountered in the anchor borehole position (in this particular case, since the reinforcement 12 lies on the axis of the borehole for the first anchor bolt 1 – the polygonal core, Figs.3 to 5, is removed from the margin covering the reinforcement 12),
drilling a borehole for said second anchor bolt (Ref. No.7, Figs.3 to 5); and
jointly attaching said composite anchor bolt (Fig.4 and 5).

Along with this, the technical result thus mentioned by the applicant, and namely – good resistance to the bending moment – is also attainable in the known technical solutions cited herein above

Thus, for a person skilled in the art, (this alternative of) the claimed invention according to independent claim 16 follows in an obvious manner from the existing state of prior art in the related field of engineering and, therefore, fails to comply with the patentability condition of "inventive step" as envisaged by Para.2, Art.1350 of the Code.

In connection with this, the Examination Division advises the applicant to report his opinion about reasonability, if any, of further proceedings in respect of the above subject matter within the scope of this application and, in case of substantiating such reasonability, to submit his arguments.

10. For the applicant's information, the Examination Division points out the following.

A.) Such features of dependent claim 18 as "a portion of said connecting part is projected outside from the concrete frame, and an equipment base is placed on said connecting part and attached with said first anchor bolt" are known in prior art to be taught by JP 59-188892 U as well as from JP 2003-96918 A.

B.) The features of dependent claim 17 are not known from the existing state of prior art in the related field of engineering.

11. In the opinion of the Examination Division, the presently claimed invention could have been characterized by the following combination of essential features:

"1. A composite anchor bolt comprising:

a first anchor bolt installed projecting outside of a reinforced concrete frame;
a second anchor bolt which is eccentrically positioned to the axis of said first anchor bolt; and
a connecting part for connecting said first and the second anchor bolts,
wherein said connecting part and the second anchor bolt are formed together in a T-shaped configuration, and said first anchor bolt is positioned on the end-face side of said connecting part.

2. The composite anchor bolt according to claim 1, wherein at least one of said first anchor bolt and said second anchor bolt is removably attachable to said connecting part."

Thus, the Examination Division would advise hereby that the applicant should submit his opinion in respect of the arguments of the Examination Division and, in case if he agrees therewith, revise appropriately the specification in conformity with both the amendments thus made to the claims and the above-mentioned observations, and submit the revised specification in 3 copies.

In case of his disagreement above the amended version of the claims thus presented herein above, the applicant would be advised hereby to submit both his own version of the claims where all the above-mentioned observations should be properly taken into consideration, as required, but without reaching, when amending the claims, beyond the frames of the original documentary evidence pertaining to the pending patent application as envisaged in accordance with the provisions under Art.28(2) of the Treaty, and a revised text of the specification in 3 copies.